



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Smith, Kevin Scott, et al. Examiner: Gates, Eric Andrew

Serial No.: 10/825,641

Group Art Unit: 3722

Filing Date: April 15, 2004

Confirmation No.: 9020

Title: DAMPING PRODUCTS AND PROCESSES

DECLARATION UNDER 37 C.F.R. § 1.132

- 1) I, Matthew A Davies, do declare as follows:
- 2) I am a co-inventor of the above-identified application.
- 3) I am familiar with the Office Action that issued in connection with the above-identified application on June 15, 2006 and the art cited by the Examiner therein.
- 4) My education and work experience are as follows:
- 5) I received my bachelor's degree in mechanical engineering from Carnegie Mellon University in 1988 and my doctoral degree in mechanical and aerospace engineering from Cornell University in 1993.
- 6) I worked at the National Institute of Standards and Technology from 1996 to 2002 and have worked as a professor at University of North Carolina – Charlotte since 2002.
- 7) I have read Rivin '304 (US Patent No. 5,322,304), which was cited by the Examiner in the Office Action that issued June 15, 2006.
- 8) It is my opinion from reading Rivin '304 that the purpose of the invention of Rivin '304 (US Patent No. 5,322,304) is to have a better fit for a conical envelope in a conical seat.
- 9) Moreover, it is my opinion based on experiments that were done by me or under my control that the invention of Rivin '304 (US Patent No. 5,322,304) although it provides a better fit for a conical envelope in a conical seat, it actually decreases the damping obtained.

10) As Appendix 1, please find the results of experiments showing that the increased force (leading to better fit) between one surface and another surface causes a reduction in the damping effects.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signed: 
Matthew A Davies

Date: 9/14/06